

Dynamic and Thermal Interaction of the Atmosphere and Hydrosphere. Transactions of the Scientific Conference in Leningrad

participants in the conference groups of young experts must be formed for the purpose of intensification of research work in this field. Systematic long-term observations of the currents carried out from ships must be organized. Further reports were delivered by:

- 7) D.L.Laykhtman on the theory of the wind drift of ice.
- 8) A.I.Fel'zenbaum on the computation of the stabilized ice drift in the Arctic Basin.
- 9) V.V.Timonov on the experimental investigation of the current and the state of the ice observed from aeroplanes.

Interesting results were obtained concerning the thermal interaction between ocean and atmosphere as well as the balance of radiation and heat in the northern part of the Atlantic Ocean, of the Barents Sea (Barentsovo more) and the Norwegian Sea (Norvezhskoye more). A great disadvantage is the lack of computations of the horizontal turbulent heat exchange as well as the lack of an analysis of the advective heat transmission. The participants in the conference pointed out considerable differences in the method of computation as carried out by different

Card 3/4

Sokin, F.M.

## 3(7) PHASE I. BOOK EXPLOITATION Sov/3121

Leningrad. Glavnaya Geofizicheskaya Observatoriya

Voprosy atnopticheskoy klimatologii i seliokeoriziki (Problems of Synoptic Climatology and Haloclimatology) Leningrad, Gidrometeorologicheskaya (Series: Iss. Trudy, vyp. 89), Errata slip inserted. 1,200 copies printed.

Sponsoring Agency: USSR. Glavnaya upravlyeniye gidrometeorologicheskoy sluzhby.

Ed. (Title page): L.A. Vitel'; Candidate of geographical Sciences; Ed. (Inside book): Yu.V. Vlasov; Tech. Ed.: N.V. Volkov.

PURPOSE: These articles are intended for geophysicists and meteorologists in the field of long-range weather forecasting.

COVERAGE: This is a collection of 8 articles in the field of synoptic climatology with emphasis on the methodology of long-range forecasting and problems in heliophysics in relation to weather. An analysis is given of studies conducted in the transfer of moisture over European USSR and the use of the results obtained in quantitative precipitation forecasting. Problems in the formation of thermal anomalies in the USSR, taking into account the inertia of the thermal regime macrocirculation, and heliophysical relations are discussed. Forecasting the level of the Caspian Sea for the coming ten-year period on the basis of expected solar activity is attempted. Problems in the verification of long-range weather forecasts are also discussed. References accompany individual articles.

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AVAILABLE: Library of Congress  
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TW/b  
2/12/80

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SOSKIN, I.M.

Salt exchange through the straits of Denmark and its effect  
on long-term salinity variations in the Baltic Sea. Trudy  
GOIN no.37:34-41 '59.  
(Baltic Sea--Salinity)  
(Denmark, Straits of--Hydrology)

SOSKIN, I.M.; ROZOVA, L.V.

Long-term variations of water temperature in the Baltic Sea.  
Trudy GOIN no.37:42-52 '59. (MIRA 13:4)  
(Baltic Sea--Temperature)

SOSKIN, I.M.

Variation of hydrological characteristics of the Baltic, Barents,  
and Caspian Seas over a period of many years and the solar activity.  
Trudy Okean.kom. 7:3-22 '60. (MIRA 13;?)

1. Leningradskoye otdeleniye Gosudarstvennogo okeanograficheskogo  
instituta.

(Baltic Sea--Hydrology)  
(Barents Sea--Hydrology)  
(Caspian Sea--Hydrology)  
(Sun)

85616

S/050/60/000/011/004/005  
B012/B063

6,8000 (320,1099,1162)

AUTHORS: Soskin, I. M., Vavilov, I. A., Rossiyskiy, B. M.

TITLE: Experience Gathered With the Use of the Radionavigation System "Koordinator" for the Observation of Currents

PERIODICAL: Meteorologiya i gidrologiya, 1960, No. 11, pp. 35-36

TEXT: In 1959 a series of experiments were made in the Baltic Sea for the purpose of determining the velocity and direction of marine currents by the use of the radionavigation system "Koordinator". This system is designed for the location of vessels. It is a follow-up system with continuous counting. A sonde-type receiver and a recording counter are mounted on the ship, while the control station and the reflecting station are installed on the shore. These experiments were performed on the test ship "Okeanograf". The drifting system (a cross and a float with a ranging rod) was located in certain intervals with the help of the above-mentioned radionavigation system. The trajectory of the drifting system determined in this way was used to calculate the elements of the

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Experience Gathered With the Use of the  
Radionavigation System "Koordinator" for the  
Observation of Currents

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B012/B063

current, and the current was simultaneously observed from an anchored ship. The elements of the current were thus obtained by two methods the results of which were found to be satisfactory. These observations are described in detail. The system "Koordinator" is recommended for use in deep-sea research. There is 1 figure.

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SOSKIN, I.M.

Results of comparing observations on the elements of currents made  
by the use of marine current meters and radio engineering equipment.  
Trudy GOIN no. 55:219-223 '60. (MIRA 14:7)  
(Ocean currents) (Oceanographic instruments)

SOSKIN, I.M.; CHERNOVSKAYA, Ye.N.

General characteristics of changes in the hydrological and hydrochemical conditions of the Baltic Sea during the past decade. Okeanologiya 1 no.3:426-431 '61. (MIRA 16:11)

1. Gosudarstvennyy okeanograficheskiy institut, Leningradskoye otdeleniye.

SOSKIN, I.M.

Hydrological fronts in the Straits of Denmark and Kattegat, their  
movement and effect on hydrological conditions in the Baltic Sea.  
Trudy GOIN no. 65:3-13 '61.  
(Baltic Sea—Hydrology)

SOSKIN, I.M.

Currents at the Khiumadal lightship. Trudy GOIN no. 65:138-153  
'61. (MIRA 14:8)  
(Baltic Sea—Ocean currents)

SOLOV'YEV, V.I.; SOSKIN, I.M.

Determining the coefficient K during work with the electromagnetic current meter in the Baltic Sea. Trudy GOIN no. 65:154-162  
'61. (MIRA 14:8)

(Baltic Sea—Ocean currents)

SOSKIN, I.M.

Empirical relations for calculating wind currents. Trudy GOIN  
no.70:3-27 '62. (MIRA 15:6)  
(Winds) (Ocean currents)

SOSKIN, Il'ya Moiseyevich. Prinimala uchastiye ROZOVA, L.V.;  
LUNDBERG, O.L., otv. red.; NEDOSHIVINA, T.G., red.;  
BRAYNINA, M.I., tekhn. red.

[Changes in the hydraulic characteristics of the Baltic Sea  
observed over a period of many years] Mnogoletnie izmeneniiia  
gidrologicheskikh kharakteristik Baltiiskogo moria. Lenin-  
grad, Gidrometeoizdat, 1963. 159 p. (MIRA 16:5)  
(Baltic Sea--Hydrology)

SOSKIN, I.M.; KUZNETSOVA, L.N.; SOLOV'YEV, V.I.

Baltic Sea currents based on the use of the dynamic method to  
process hydrological observations. Trudy GOIN no.73:76-95 '63.  
(MIRA 16:7)

(Baltic Sea—Ocean currents)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001652520017-2

SOSKIN, I.M.

Calculation scheme of wind currents of the Baltic Sea. Trudy  
GOIN no. 81:54-61 '64. (MIRA 17:11)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001652520017-2"

SOSKIN, I.V., pomoshchnik mashinista

Utilizing reserve wires on diesel locomotives. Elek. i tepl.  
(MIRA 12:1)  
tiaga 2 no.12:38 D '58.

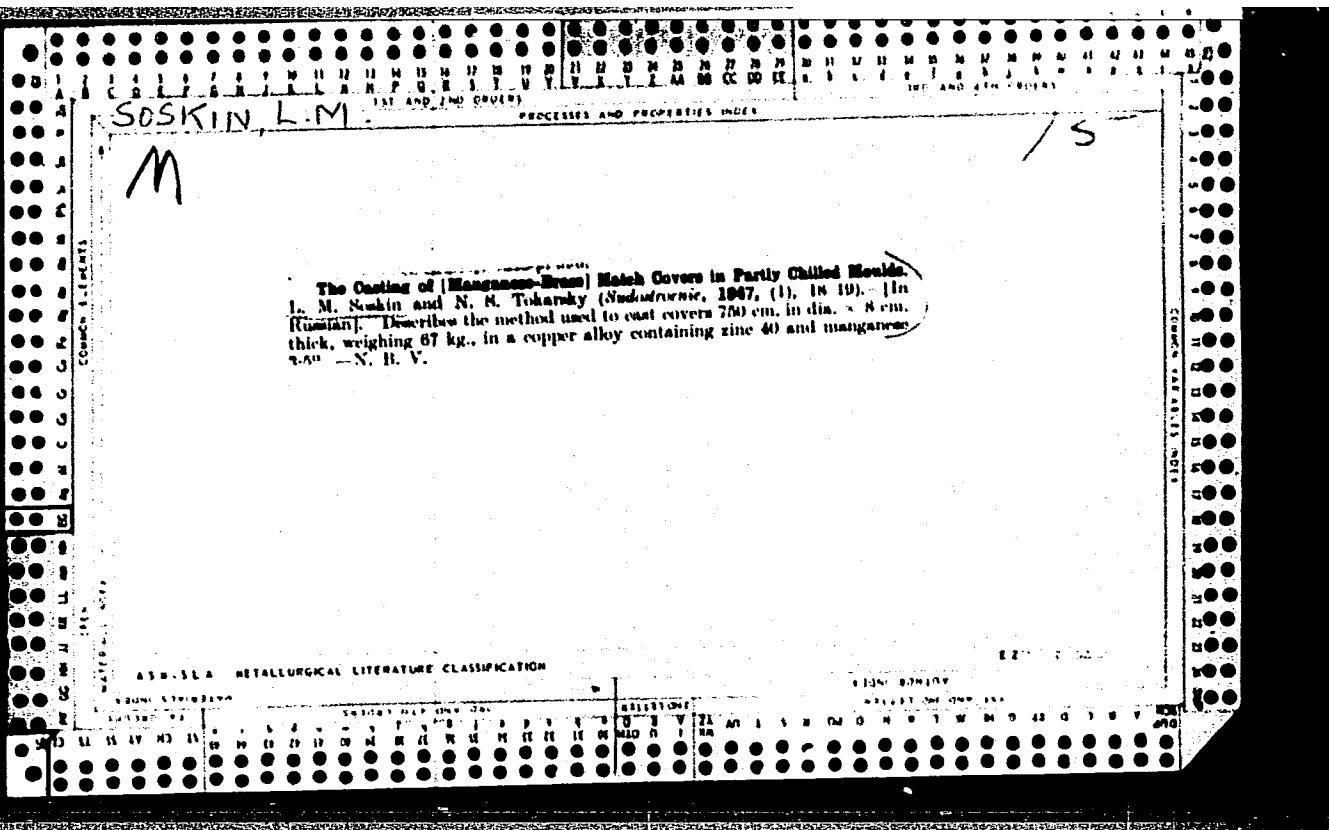
1. Depo Leningrad-Moskovskiy, Oktyabr'skaya doroga.  
(Diesel locomotives—Electric equipment)

SOSKIN, L.

Methodology of job analysis in the radio industry. Sots.trud  
4 no.7:71-74 J1 '59. (MIRA 13:4)  
(Radio industry) (Job analysis)

SOSKIN, L.

Review of D.T. Kuimov and A.S. Shmar'ian's book "Subdural  
hematomas." Zhur. nevr. i psikh. 63 no.4:634-636 '63.  
(MIRA 17:2)



SOSKIN, L. M.

Planirovanie optychnogo proizvodstva. Moskva, Mashgiz, 1949. 167 p. diagrs.

Planning an experimental production.

DLC: TJ1135.S67

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library  
of Congress, 1953.

SOSKIN, L.M.; TOKARSKIY, N.S.; KRASIL'SHCHIK, N.L.; BARANOV, I.A., inzh.,  
red.; KLOPOVA, T.B., tekhn.red.

[Making work piece blanks from nonferrous alloys by stamping  
molten metal] Poluchenie zagotovok detalei tsvetnykh splavov  
metodom shtampovki iz zhidkogo metalla. Leningrad, 1956. 12 p.  
(Leningradskii dom nauchno-tekhnicheskoi propagandy. Informatsionno-  
tekhnicheskii listok, no.20. Liteinoe proizvodstvo) (MIRA 10:12)  
(Forging)

PHASE I BOOK EXPLOITATION 902

Soskin, Lev Mikhaylovich and Tokarskiy, Natan Solomonovich

Shtampovka detaley iz zhidkogo metalla (Press Diecasting of Parts  
From Molten Metal) [Leningrad] Lenizdat, 1957. 122 p.  
3,000 copies printed.

Ed.: Lepin, A.E.; Tech. Ed.: Rodchenko, N.I.

PURPOSE: This booklet is a practical manual for specialized workers  
and engineers in the founding, forging and stamping industries.

COVERAGE: The booklet presents experience gained in the production  
of complex parts from nonferrous alloys by a method of press die-  
casting molten metal. It is stated that this method consists of a  
new advanced manufacturing process which up to the present time  
has not found wide industrial application. Problems of preparing  
and pouring nonferrous alloys are discussed and their physical,  
chemical, and mechanical properties are presented. The following

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Press Diecasting of Parts (Cont.)

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personalities took part in developing and introducing the press diecasting method: Z.V. Malashenkov, head of the laboratory, developed a method for controlling the temperature of molten metal and dies; N.K. Kucherenko, laboratory engineer, conducted various tests with produced parts; N.A. Slavin, head foreman, took an active part in introducing the method to industry; P.I. Pankin, head of the foundry laboratory, participated in developing press diecasting techniques; L.G. Rot'kin, technologist of the metallurgical department took part in determining press diecasting regimes. The whole project was conducted in close cooperation with the All-Soviet Design and Manufacturing Institute. N.S. Krasil'shchik, S.I. Koromyslov, I.M. Krolik, and M.V. Afanas'ev are also mentioned as contributors. There are 24 Soviet references.

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1. Characteristics of alloys	7

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SOSKIN, L. M.

Moscow, Mashgiz, 1957, 205pp.

In book Shaped Casting of Copper, (Cont.) Collection of Articles, 509

Soskin, L. M. and Tokarskiy, N. S., Engineers. Manufacture of Copper-Alloy Parts by Compression Molding of Molten Metal (Plant Practice)

156

Compression molding of molten metal is described by the authors as the most efficient method for preparing nonferrous high integrity parts. Compression molding of molten metal is said to be carried out on a 750-ton press with either a vertical or a horizontal plunger. Parts produced by this method are reported to have mechanical properties as good as those produced by forging and to be more economical than conventional casting because no material is wasted for reformed blanks, or risers and gates. The various aspects of compression molding are described and illustrated and there are also numerous photomicrographs showing the uniformly fine-grained structure of compression-molded parts. The text briefly outlines the characteristic equipment used, and an appendix lists safety rules to be observed in compression molding of molten metal. No personalities are mentioned. There are no references.

Book contains papers presented at convention Moscow, Dec '55, on shaped-copper-alloy Casting in Plaster alloy. Bazden'yants, V. G., Engineer. Technology of Copper-alloy Casting in Plaster alloy. Molds

Casting 169

This method of casting is said to be useful only when a small number of castings are to be produced or when design changes are frequent but good dimensional accuracy with high surface quality is desirable. The author describes the accepted Card 14/17

SOSKIN, L. M.

SOS/2056

20(1)

**NAME & BOOK INFORMATION**  
 Sovn. nationalizatii nauchno-tekhnicheskoye proizvodstvo, k 25-letiyu Izdatelstva  
 (Departament po importu i exportu, 1957-1962). 3,000 copies printed.  
 (Leningrad) Author: N. V. Yemelyanov;

Na. (title page); P. V. Romanov. Ed. (title book); N. V. Yemelyanov;  
 Tchek. Mat. NII. Redaktsiya

**PURPOSE:** The collection of articles is intended for workers and engineers in related branches or machine manufacturing.

**CONTENTS:** The book describes the experience gained at several industrial plants over abroad and also for designers of equipment, modernization of equipment, and improvements in the economy and planning of forging production. There is no information on the cost of production.

**NAME OF CONTRIBUTOR:** Practices in Producing Work Forging

/Gol'denblat, S. M., and I. D. Boris - Practices in Introducing New Facilities

112

Gol'denblat, S. M., and I. D. Boris. Practices in Percussion Presses

127

Practices of Non-Ferrous Alloys in Percussion Presses

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Boris, I. M., and I. S. Romanov. Press-Deburring of Molten Non-Ferrous

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Metallo. In. M., and I. S. Romanov. Press-Deburring of Molten Non-Ferrous

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Alloys

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Practices in Modernizing Forging Equipment and

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Modernizing Its Repair

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Gol'denblat, S. M. Practices in Modernizing the Power Screw Percussion Press

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Gol'denblat, S. M. Practices in Modernizing the Power Screw Percussion Press

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Mat. A. G. (Institute of Economic Sciences and Doctor, Institute of Economic Sciences and Planning of Power Shop)

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SOS/AL

(C)

10-18-59

SOSKIN, L. S.

USSR/Medicine, - Nervous System, Surgery  
Medicine - Blood Pressure, High

Jul/Aug 48

"Surgical Treatment for Cerebral Syndromes Due to Hypertonia," A. M. Grinshteyn,  
Active Mem, Acad Med Sci, Prof. G. G. Yegorov, L. S. Soskin, Cand Med Sci, Moscow,  
Dept of Surg of the Vegetative Nervous Syst and Inst of Neurosurg imeni Acad N. N.  
Burdenko, Acad Med Sci USSR, 8½ pp

"Voprosy Neirokhirurgii" Vol XIII, No 4

Abdominal nerves were severed and excision of second and third lumbar ganglia of the peripheral trunk on one side was performed on 18 patients with cerebral syndromes of dynamic hypertension and on 8 patients afflicted with endarteritis obliterans and high blood pressure. In majority of cases blood pressure decreased and cerebral symptoms improved or disappeared.

P# 13/49T95

OSKIN, L. S., GIMBLEYN, A. I., MARYAN, K. G., and IGNATOV, M. G.

Treatment of cerebral manifestations of hypertension by operation on the sympathetic nervous system Vol. Nierokhir. 1950, 1 (26-34).

The operation consists in bilateral extirpation of the 1st and 2nd lumbar ganglia and denervation of the 'abdominal' portion of the sympathetic. No extirpation of the reno-aortic node of the solar plexus and no operation on the kidneys or adrenals is performed. Selection of patients is based on circulatory tests, particular attention being paid to the behaviour of the Blood pressure after hyperventilation and after administration of nitroglycerin.

Decker - Munich (VIII, 9)

Sc.: Neurology & Psychiatry Section VIII, Vol. 4, No. 1-6

SOSKIN, L. S., GRINSTEIN, A. M.

Sympathectomy in treatment of cerebral syndromes of high blood pressure.  
Ter. arkh. 22:3, May-June 50. p. 21-6

1. Of the Division of Vegetative Neurosurgery (Scientific Director--  
Prof. A. H. Grinshteyn, Active Member of the Academy of Medical  
Sciences), Institute of Neurosurgery imeni Academician N. N. Burdenko  
of the Academy of Medical Sciences (Director--Prof. B. G. Yegorov,  
Corresponding Member of the Academy of Medical Sciences).

CLML 19, 5, Nov., 1950

SOSKIN, L. S.  
(# 4365)

The influence of sympathectomy on neurological syndromes in obliterating arteritis  
(Russian text) Vop. Neirokhir. 1951, 15/6 (11-17)  
Report on 102 patients. Regardless of the fact that endangiitis obliterans is arterio-  
sclerotic in origin and thrombangiitis inflammatory, both conditions are studied  
and described together, since the ischaemic effect in both is identical and the  
same treatment effective. Fifty-eight cases were followed up for periods up to 3  
years. The damage of the affected limb is due to anatomical changes of the vessels  
and reflex disturbances of the vascular innervation, the pathological signs being  
caused by ischaemia both of tissue and peripheral nerve trunks. In many cases  
preganglionic sympathectomy ThII to III or LII to III, respectively, gives satis-  
factory results. Presumably, the operating acts by interruption of efferent vaso-  
constrictor impulses and of sensory afferent stimuli as well.

Hoppner - Graz

SO: EXCERPTA MEDICA Vol. 5 No. 11 Sec. VIII November 1952

SOSKIN, L.S., kandidat meditsinskikh nauk (Moscow).

Philosophical and socio-political views of I.P.Pavlov. Fel'd.i akush.  
(MLRA 7:3)  
no.3:6-12 Mr '54.  
(Pavlov, Ivan Petrovich, 1849-1936)

SOSKIN, L.S., kandidat meditsinskikh nauk (Moskva)

Endarteritis obliterans and its therapy. Fel'd. i akush. no.6:  
24-31 Je '55.  
(ENDARTERITIS OBLITERANS, ther.)

SOSKIN, L.S.,kandidat meditsinskikh nauk (Moskva)

Thrombophlebitis of the lower extremities and its therapy. *Feid.*  
i akush.no.1:14-20 Ja '56 (MLRA 9:4)

(EXTREMITIES, LOWER--DISEASES) (VEINS--DISEASES)

EXCERPTA MEDICA Sec.8 Vol.11/4 Neuro.-Psychiatry Apr 58  
Soskin, L.S.

1648. THE PRESENT STATE OF THE QUESTION OF TREATMENT IN CEREBRAL VASCULAR ACCIDENTS (Russian text) - Soskin L.S. - SOVETSK MED. 1956, 11 (8-18)

A survey is given of the present views on the treatment of cerebral vascular accidents. A detailed description is given of the conservative methods of treatment and of the possibilities of surgical intervention depending on the nature of the lesions (thrombosis, haemorrhage). (S)

SHABANOV, Aleksandr Nikolayevich; SOSKIN, Lazar' Semenovich

[Thrombophlebitis of the lower extremities and their treatment]  
Tromboflebitis nizhnikh konechnostei i ikh lechenie. Moskva,  
Medgiz, 1957. 34 p. (MIRA 13:12)  
(PHLEBITIS) (EXTREMITIES, LOWER--DISEASES)

SHABANOV, Aleksandr Nikolayevich, prof.; SOSKIN, Lazar' Semenovich, kand.  
meditsinskikh nauk.; POPOV, G.F., red.; BUL'DYAEV, N.A., tekhn. red.

[Endarteritis obliterans and its treatment] Obliteriruiushchii  
endarterit i ego lechenie. Moskva, Gos. izd-vo med. lit-ry, 1957. 55 p.  
(MIRA 11:11)

(ARTERIES--DISEASES)

SOSKIN, L. S.

MISCELLANEOUS

"The Eleventh Session of the Academy of Medical Sciences of the USSR",  
by L.S. Soskin, Fel'dsher i Akusherka, No 6, June 1957, pp 62-63.

At the Eleventh Session, the Minister of Health of the USSR, M.D. Kovrigina, pointed to the fact that influenza, acute catarrh of the upper respiratory system, and anginae have caused one fifth of all the temporary losses in man-power. Some years ago, the institutes of the Academy of Medical Sciences of the USSR had tried to develop influenza control. Both, prophylactic vaccines and medical scrums controlling influenza were proposed; but this problem is, as yet, not at all solved. Although the mortality rate in measles, whooping cough, scarlet fever, diphtheria and chicken pox has recently been reduced, the morbidity rate of these diseases, nevertheless, still remains high. Meanwhile, the West has already developed an effective combined vaccine controlling both diphtheria and whooping cough.

The Minister, Kovrigina, has assigned to Soviet scientists the task to elaborate on the measures against poliomyelitis and for pneumonia

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MISCELLANEOUS

control in children. The Ministry of Health of the USSR has charged the Presidium of the Academy with the duty to plan and coordinate research in the medical field throughout the Soviet country as a whole.

There are new problems such as, for example, the acclimatization of the people in the northern regions of the USSR, the utilization of virgin soil and the building of hydrostations.

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SOSKIN, L.S.,kandidat meditsinskikh nauk (Moskva)

Neuroses of internal organs. Fel'd. i akush. 22 no.1:6-13 Ja '57  
(MIRA 10:4)

(NEUROSES) (VISCERA-- INNERVATION)

SOSKIN, L.S. (Moskva)

Eleventh session of the Academy of Medical Sciences of the U.S.S.R.  
Fel'd i akush. 22 no.6:62-63 June '57. (MIRA 12:3)  
(MEDICINE)

SOSKIN, L.S., kand.med.nauk (Moscow)

Apoplexy: clinical aspects and diagnosis. Fel'd. i akush. 23  
no. 6:14-19 Je'58 (MIRA 11:6)  
(APOPLEXY)

SOSKIN, L.S., kand.med.nauk (Moscow)

Cerebral apoplexy; first aid. Fel'd. i akush. 23 no.7:6-10 JI'58  
(MIRA 11:6)

(APOPLEXY)

SOSKIN, L.S.; POLONSKAYA, Ye.M.

Peculiarities in the clinical aspects of intracerebral hemorrhage  
with a break-through into the cornu posterius of the lateral  
ventricle. Trudy Gos. nauch.-issl. psichonevr. inst. no.20:323-  
332 '59. (MIRA 14:1)

1. Klinika nervykh bolezney Tsentral'nogo instituta usovershen-  
stvovaniya vrachey, Moskva.  
(BRAIN—HEMORRHAGE)

SOSKIN, L.S., kand.med.nauk (Moskva)

Surgical therapy of cerebral hemorrhage; a survey of foreign literature. Vopr.neirokhir. 23 no.2:46-53 Mr-Ap '59. (MIRA 12:4)  
(CEREBRAL HEMORRHAGE, surgery,  
review (Rus))

KUN, A.M.; SOSKIN, L.S.

Clinical and angiographic parallels in vascular diseases of the  
brain. Vop.neirokhir. 24 no.1:14-21 Ja-F '60. (MIRA 13:10)  
(BRAIN—RADIOGRAPHY)

SOSKIN, L.S.; RAVIKOVICH, M.A.

Aneurysms of the cerebral vessels; survey of foreign literature.  
(MIRA 13:10)  
Vop.neirokhir. 24 no.1:38-44 Ja-F '60.  
(INTRACRANIAL ANEURISMS)

SOSKIN, L.S.

Difficulties in the early diagnosis of cerebral apoplexy. Sov.  
med. 24 no. 2:24-31 F '60. (MIRA 14:2)

1. Iz neyrokhirurgicheskogo otdeleniya (zav. - doktor med. nauk  
I.M. Irger) Instituta psichiatrii (direktor - prof. D.D. Fedotov)  
AMN SSSR.  
(APOPLEXY)

SHABANOV, Aleksandr Nikolayevich; SOSKIN, Lazar' Semenovich;  
LAGUTINA, Ye.V., red.; BALDINA, N.F., tekhn. red.

[Endarteritis obliterans] Obliteriruiushchii endarteriit.  
Izd.2. Moskva, Medgiz, 1961. 42 p. (MIRA 15:3)  
(ARTERIES--DISEASES)

IRGER, I.M.; KUN, A.M.; SOSKIN, L.S. (Moskva)

Clinical aspects and surgical treatment of extensive malacias of  
the brain. Vop.neirokhir. no.5:16-21 '61. (MIRA 14:11)

1. Neyrokhirurgicheskoye otdeleniye Klinicheskoy ordena Lenina  
bol'nitsy imeni S.P. Botkina.  
(BRAIN--SOFTENING)

SOSKIN, L.S., kand.med.nauk (Moskva)

Trophic ulcers and their treatment. Med. sestra 20 no.1:14-20  
Ja '61. (MIRA 14:3)  
(ULCERS)

SOSKIN, L.S., kand.med.nauk

Hemorrhages into the cerebellum. Sov.med. 25 no.7:104-109 Jl '61.  
(MIRA 15:1)

1. Iz neyrokhirurgicheskogo otdeleniya (zav. - doktor meditsinskikh  
nauk I.M.Irger) Instituta psichiatrii AMN SSSR (dir. - prof. D.D.Fedotov).  
(BRAIN HEMORRHAGE)

SHABANOV, A.N., prof.; SOSKIN, L.S., kand.med.nauk

Obliterating endarteritis. Zdorov'e 8 no.12:14-15 D '62.  
(MIRA 16:1)  
(ARTERIES--DISEASES)

SOSKIN, L.S., kand.med.nauk (Moskva)

Acute circulatory disorders of the brain. Med.sestra 21 no.11:  
44-50 N '62. (MIRA 16:3)  
(CEREROVASCULAR DISEASE)

SOSKIN, L.S. (Moskva)

Surgical treatment of hemorrhages into the brain; a survey of  
the literature. Klin.med. 40 no.10:17-25 0 '62. (MIRA 15:12)  
(BRAIN--HEMORRHAGE)

SOSKIN, L.S. (Moskva)

Surgical treatment of cerebellar hemorrhage; a review of literature.  
Zhur. nevr. i psikh. 63 no.9:1427-1432 '63. (MIRA 17:8)

SOSKIN, L.S.; USOL'TSEV, A.N.

Proximal amyotrophy in some endocrine diseases; a review of  
foreign literature. Zhur. nevr. i psikh. 64 no.3:468-474 '64.  
(MIRA 17:5)

1. Vsesoyuznyy institut eksperimental'noy endokrinologii  
(direktor - prof. Ye. A. Vasyukova), Moskva.

SPURKIN, M.I.

AUTHORS: Moshkin, P.A., Velizar'yeva, N.I., Rapoport, I.B., Klapishevskaya, Z.B., Makhnenko, G.Kh., and Soskin, M.A.

TITLE: Paraffins from sulphurous crude oils as a raw material for the production of synthetic fatty acids. (Parafiny serinstykh neftey kak syr'ye dlya proizvodstva sinteticheskikh zhirnykh kislot).

65-6-7/13

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masel" (Chemistry and Technology of Fuels and Lubricants) 1957, No.6, pp.41-47 (USSR).

ABSTRACT: This investigation was carried out under the direction of Prof. L.G.Zherdeva and Candidates of Chem.Sc., E.V.Voznesenskaya and A.A. Karaseva. The object of the work was to investigate the possibility of producing fatty acids suitable for soap making by the oxidation of paraffin obtained from sulphurous crude oils (1.5-1.6% of sulphur). Data on the raw materials used are given in table 1. The experiments were carried out on a VNII-NP pilot plant (a column 3000 mm high and 280 mm in diameter, the weight of the charge about 30 kg) which was used for the oxidation of paraffin from Drogobych crude. Samples of fresh paraffin and its mixtures with so called 1<sup>st</sup> and II<sup>nd</sup> non-saponified products were oxidised. The process consisted of: low temperature oxidation (108-110 C) in the presence of potassium

Card 1/3

5.3400

77043  
Sov/63-4-6-35/37

AUTHORS: Moshkin, P. A., Kobzova, R. I., Velizar'yeva, N. I., Soskin,  
M. A., Karzhev, V. I., Rapoport, I. B.

TITLE: Higher Aliphatic Alcohols From Solid Paraffin Oxidation Products

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 6,  
pp 811-812 (USSR)

ABSTRACT: This is a summary of the article published in Khimiya  
i tekhnologiya topliv i masel, 1960, Nr 1, pp 24-27,  
our Abstract 77043.

ASSOCIATION: Scientific Research Institute for the Processing of  
Petroleum and Gas and for the Production of Synthetic  
Liquid Fuel (Nauchno-Issledovatel'skiy institut po  
pererabotke nefti i gaza i polucheniyu iskusstvennogo  
zhidkogo topiva)

SUBMITTED: July 13, 1969  
Card 1/1

3

S/065/60/000/009/003  
E194/E184

The Eighth Scientific Conference on the Use of Ultrasonics to  
Investigate Substances

A study of the production of polymers with a high voltage spark discharge was described by N.I. Kogan, M.S. Akutin, N.Ya. Parlashkevich and V.V. Rubinshteyn of the Plastics Scientific Research Institute. Various ultrasonic methods of investigating polymers were described by A.V. Kustova, B.E. Geller, and N.I. Larionov. In the section on acoustic methods of investigation, workers of Giprovostokneft, O.I. Koptel', Ye.A. Kuznetsov, G.V. Cherchenko and N.K. Khozhaylov described the measurement of liquid density using an ultrasonic method of locating a float. M.L. Varlamov and colleagues of the Odessa Polytechnical Institute described tests on high power acoustic gas jet generators types GS-5 and GS-5A. I.P. Kozlobayev of the Voronezh State University described the methods of measuring the piezo-effect of barium titanate ceramics.<sup>15</sup> There were a number of works on the theory of piezo-electric devices by V.F. Yakovlev, V.I. Kamyanov and others. A.V. Kharitonov, N.B. Leginev and A.A. Berdyev described new measuring equipment.

Card 2/4

S/065/60/000/009/003/003  
E194/E184

The Eighth Scientific Conference on the Use of Ultrasonics to Investigate Substances

of other important reports on the use of ultrasonics in industry, including that of V.M. Fridman (TsNIKP) who discussed the mechanism of ultrasonics in heterogeneous processes of liquid treatment. The report of L.D. Rosenberg of the Acoustics Institute on the fundamentals of the industrial application of ultrasonics was of great theoretical and practical interest. The Conference pointed out the need for still more extensive development of work on the use of ultrasonics in various branches of science and technology. There are no figures, tables or references.

Card 4/4

MOSHKIN, P.A.; RAPOPORT, I.B.; SOSKIN, M.A.

Processing of oxides in the production of synthetic fatty acids  
without the use of alkalies and sulfuric acid. Khim. i tekhn. topl.  
i masel 10 no.7:27-32 Jl '65. (MIRA 18:9)

ZHUK, P.M.; SOSKIN, M.B.

Industrial centers in uninhabited zones of a city. Prom.stroi  
42 no.2:13-16 '65. (MIRA 18:4)

LIVOVSKIY, P.G.; PAL'MOV, Ye.V., professor doktor, retsenzent; KRASNOV,  
K.V., inzhener, retsenzent; ZAKROCHINSKIY, S.V., inzhener, retsenzent;  
SHKLOVSKIY, M.B., inzhener, retsenzent; BOGACHEV, I.N., professor  
doktor tekhnicheskikh nauk, redaktor; AKHUN, A.I., kandidat tekhnicheskikh  
nauk, redaktor; BARANOV, V.M., kandidat tekhnicheskikh nauk,  
redaktor; RYZHIKOV, A.A., kandidat tekhnicheskikh nauk, redaktor;  
FILIPPOV, A.S., kandidat tekhnicheskikh nauk, redaktor; CHERNOBROVKIN,  
V.P., kandidat tekhnicheskikh nauk, redaktor; YAKUTOVICH, M.V., kandi-  
dat tekhnicheskikh nauk, redaktor; GRISHCHENKO, M.F., inzhener, redaktor;  
ZASLAVSKIY, I.A., inzhener, redaktor; KROKHALEV, V.Z., inzhener, redak-  
tor; SOSKIN, M.D., inzhener, redaktor.

[Manual for the mechanic in a metallurgical plant] Spravochnoe ruko-  
vodstvo mekhanika metallurgicheskogo zavoda. Izd.3., ispr. i dop.  
Moskva, Gos. nauchno-tekhn. izd-vo lit-xy po chernoi i tsvetnoi metal-  
lurgii, 1953. 1112 p. (MLRA 7:4)

(Mechanical engineering--Handbooks, manuals, etc.)

ZAKROCHINSKIY, Stepan Vasil'yevich; SOSKIN, Mendel' Davidovich;  
ZHILYAYEV, A.V., red.; ZEF, Ye.M., tekhn.red.

[Regulations on boiler maintenance] Rukovodiashchie materialy  
po kotlonadzoru. Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry  
po chernoi i tsvetnoi metallurgii. Sverdlovskoe otd-nie, 1959.  
813 p. (MIRA 14:1)

(Boilers--Handbooks, manuals, etc.)

RAZUMOVSKIY, Vyacheslav Pavlovich; BOTASHEV, N.S., retsenzent; SOSKIN,  
M.D., red.; LUCHKO, Yu.V., red.izd-vs; TURKINA, Ye.D., tekhn.red.

[Handbook for crane operators; manual for individual and team  
training under operating conditions] Rukovodstvo dlja podkra-  
novykh rabochikh; uchebnoe posobie dlja individual'no-brigadnogo  
obucheniia rabochikh na proizvodstve. Sverdlovsk, Gos.nauchno-  
tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe  
otd-nie, 1960. 151 p.  
(MIRA 14:3)  
(Cranes, derricks, etc.)

ZAKROCHINSKIY, S. V., inzh.; SOSKIN, M. D., inzh.

Internal inspection and hydraulic testing of steam boilers.  
Bezop. truda v' prom. 5 no. 11:18-19 N '61. (MIRA 14:11).  
(Boiler inspection)

L'VOVSKIY, Pavel Grigor'yevich; PAL'MOV, Ye.V., prof., doktor tekhn.  
nauk, retsenzent; SHKLOVSKIY, M.V., inzh., retsenzent;  
GURVITS, A.I., inzh., retsenzent; NOSENKO, S.M., inzh.,  
retsenzent; SAKHARIN, N.N., inzh., retsenzent; SOSKIN, M.D.,  
inzh., red.; BALAZOVSKIY, M.Ya., inzh., red.; CHAPAYKINA, F.K.  
red. izd-va; KRYZHOOVA, M.L., red.izd-va; MATIYUK, R.M., tekhn.  
red.; TURKINA, Ye.D., tekhn. red.

[Manual for mechanics in metallurgical plants] Spravochnoe ruko-  
vodstvo mekhanika metallurgicheskogo zavoda. Izd.4., ispr. i  
dop. Sverdlovsk, Metallurgizdat, 1961. 1105 p. (MIRA 15:3)

(Mechanical engineering)

(Metallurgical plants—Equipment and supplies)

ZAKROCHINSKIY, Stepan Vasil'yevich; SOSKIN, Mendel' Davidovich;  
SOSKINA, I.M., red.; SHKLOVSKAYA, I.Yu., red.izd-va;  
DOBZHINSKAYA, L.V., tekhn. red.

[Reference materials on boiler inspection] Rukovodisia-  
shchie materialy po kotlonadzoru. Izd.2., perer. i dop.  
Moskva, Metallurgizdat, 1963. 823 p. (MIRA 17:1)

SOSKIN, M.S.

Quantitative Spectrographic Analysis with the Aid of the Steeloscope. A. M. Borbat, M. S. Soskin, and G. G. Finkel'stein. (Zavodskaya Laboratoriya, 1954, 21, (3), 313-318). [In Russian]. Methods are described for the quantitative analysis of various ferrous and other alloys with the aid of a standard steeloscope and an A.C. arc. No photometric devices are needed, the basis of the methods being the electro-arcation of the sample. A special revolving false electrode is used for the deposition of the element being estimated.—S. K.

3

*Rew. by*

Kiev State U.

NOV/48-22-11-8/33  
Connection of Absorption and Dispersion in Crystals at the Example of the  
1,2-Benzanthrazen

mentally and calculated, an obvious divergence is shown. It is far beyond the limit of error (the calculated turning of the scale is at least three times smaller than the one determined experimentally). This has been observed on all 1,2-benzanthrazen-crystals examined. This divergence will be smaller for the same spectral-component at a normal temperature, but it will be still of importance. Similar phenomena have been observed earlier with crystals of other substances at low temperatures. There are 2 figures and 8 references, 6 of which are Soviet.

ASSOCIATION: Institut fiziki Akademii nauk USSR (Institute of Physics,  
AS UkrSSR)

Card 2/2

SOSKIN, M.S.

Determination of the apparatus function of instruments with diffraction gratings. Ukr. fiz. zhur. 4 no.2:239-246 Mr-Ap '59.

(MIRA 13:1)

1. Institut fiziki AN USSR.  
(Spectrograph)

SOV/51-6-1-5/30

AUTHORS:

Brodin, M.S., Pridhat'ko, A.F. and Soskin, M.S.

TITLE:

On Non-Validity of the Kramers-Kronig Dispersion Relationships in  
the Case of Molecular Crystals at Various Temperatures (O  
neschlyudani dispersionnykh sootnosheniy Kramersa--Kroniga v  
sluchayakh kristalov pri razlichnykh temperaturakh)

PERIODICAL:

Optika i Spektroskopiya, 1958, Vol. 6, Nr. 1, pp 26-32 (USSR)

ABSTRACT:

Kramers-Kronig formulae (Ref 1) give the relationship between refractive indices and the absorption coefficients of a sample. They are derived from Maxwell's electromagnetic equations and should hold wherever Maxwell's theory holds. For some substances the Kramers-Kronig formulae were found to hold at room temperature (Refs 2, 3). The same substances when tested at low temperatures showed a disagreement between theory and experiment. The present paper describes an attempt at verification of these relationships in strongly absorbing molecular crystals of anthracene, 1,2-benzanthracene, stilbene and tolane which were studied at temperatures of 290, 80 and 20°K. The experimental data on absorption and dispersion of light in monocrystals of anthracene, stilbene and tolane were published earlier (Refs 5-7). The present paper gives the results obtained on 1,2-benzanthracene; these results

APPROVED FOR RELEASE

00513R001652520017-2

Card 1/3

On Non-Validity of the Kramers-Kronig Dispersion Relationships in the Case of Molecular Crystals at Various Temperatures

are shown in Fig 1 (absorption spectrum at 20°K) and Fig 2 (dispersion curve at 20°K - curve 1 was obtained experimentally and curve 2 was calculated). To measure the absorption and dispersion, thin samples, cut from monocrystals, were used. The monocrystals themselves were produced by sublimation. Measurements were made in polarized light. The dispersion curves were obtained interferometrically. The Kramers-Kronig dispersion relationships in some molecular crystals on 1,2-benzanthracene show that in some molecular crystals the Kramers-Kronig dispersion relationships may not be obeyed. The departure from these relationships is greatest at the lowest temperatures and it

Card 2/3

24(4), 24(6)

AUTHORS: Brodin, M.S. and Soskin, M.S.

SOV/51-6-5-7/34

TITLE: Studies of the Absorption Spectrum of 1,2-Benzanthracene Monocrystals  
in the Region of the Lowest Electron Transitions (Issledovaniye spektra  
pogloshcheniya monokristalla 1,2-benzantratsena v oblasti nizhayshikh  
elektronnykh perekhodov)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 5, pp 600-604 (USSR)

ABSTRACT: The authors obtained absorption spectra of 1,2-benzanthracene monocrystals (grown by sublimation) in polarized light at 20 and 290°K, in order to fill the gap in the spectral data on simple aromatic hydrocarbons (no work on the spectra of 1,2-benzanthracene was published so far). The absorption spectra were obtained for two components (a and b) in the region 25 000-33 000 cm<sup>-1</sup>, which corresponds to the lowest singlet electron transitions. These spectra are shown in Figs 2 and 3, for 20 and 290°K respectively. 1 and 2 in Figs 2 and 3 denote the b-component and the a-component absorption curves respectively. The authors determined the integral intensities (areas S under the curves) of individual absorption bands and of the whole spectrum. The results of these calculations are given in Tables 1 (for 20°K) and 2 (for 290°K). The polarization ratio  $S_b/S_a$  ( $S_a$ ,  $S_b$  are the corresponding areas under

Card 1/2

AUTHORS: Brodin, M.S., Prikhot'ko, A.F. and Soskin, M.S.

SOV/51-7-2-25/34

TITLE: On Certain Dispersion Anomalies of Strongly Absorbing Crystals (O nekotorykh osobennostyakh dispersii sil'no pogloshchayushchikh kristallov)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 2, pp 266-267 (USSR)

ABSTRACT: The authors showed earlier (Ref 1, 2) that certain molecular crystals, such as 1,2-benzanthracene and anthracene, do not obey the Kramers--Kronig dispersion relationships and that the degree of the departure from these relationships increases with lowering of temperature. The authors used a Jamin interferometer to obtain the dispersion curves throughout the region of the first electron-vibrational transition, with the exception of the wavelengths where maximum absorption occurred in strong bands, i.e. wavelengths at which anomalous dispersion took place. The present paper describes studies of these anomalous dispersion regions in thin crystals of 1,2-benzanthracene and anthracene. An arrow in Fig 1 shows the maximum of the first long-wavelength absorption band in the g-component of the spectrum of 1,2-benzanthracene (0.25  $\mu$  thick) at 20°K. It is seen that the interference bands in the region of the arrow are apparently split into two and overlap, which is not predicted by the

Card 1/2

On Certain Dispersion Anomalies of Strongly Absorbing Crystals SOV/51-7-2-25/34

usual theory of anomalous dispersion. It is suggested that the observed effect is due to propagation of two identically polarized waves with unequal bath differences. This dispersion peculiarity was not observed in 1,2-benzanthracene at room temperature (Fig 2). In the case of anthracene the splitting and overlapping of interference bands at the absorption maxima was observed both at low and at room temperatures. The predicted (Refs 5, 6) for the region of exciton absorption in crystals. The authors suggest that this may in fact explain the observed anomalies. If this interpretation is correct such anomalies should not be observed in impurity crystals. The latter conclusion is confirmed by a photograph of the interference system in the absorption region of anthracene molecules present in a crystal of dihydroanthracene (Fig 3); no anomalies are seen in that photograph. The authors point out that the observed anomalies occur only in the case when the Kramers--Kronig relationships are not obeyed. There are 3 figures and 6 references, 5 of which are Soviet and 1 English.

SUBMITTED: February 21, 1959

Card 2/2

SOSKIN, M.S.

Investigating the form of the self-absorption band of a naphthalene  
crystal at 20—290°K. Ukr. fiz. zhur. 5 no. 5:707-710 S-0 '60.  
(MIRA 14:4)

1. Institut fiziki AN USSR.  
(Naphthalene—Spectra)

BRODIN, M.S.; PRIKHOT'KO, A.F. [Prykhot'ko, A.F.]; SOSKIN, M.S.

Optical properties of crystals. Part 1. Ukr. fiz. zhur. 5 no. 6:725-  
743 N-D '60. (MIRA 14:3)

1. Institut fiziki AN USSR.  
(Crystals--Optical properties)

SOSKIN, M. S.

Cand Phys-Math Sci - (diss) "Study of the form of the exciton absorption band and relations of absorption and light dispersion in molecular crystals." Moscow, 1961. 8 pp; (Inst of Crystallography of the Academy of Sciences USSR); 200 copies; price not given; bibliography at end of text (14 entries); (KL, 5-61 sup, 174)

BABENKO, V.P.; BRODIN, M.S.; SOSKIN, M.S.

Cryostat for dispersion measurements at low temperatures.  
Prib. i tekhn.eksp. 6 no.6:140-141 N-D '61. (MIRA 14:11)

1. Institut fiziki AN USSR.  
(Cryostat)

SOSKIN, M.S.

Study of the shape of the fundamental absorption bands of the  
naphthalene crystal. Part 2. Ukr.fiz.zhur. 6 no.6:806-812 N-D '61.  
(MIRA 16:5)

1. Institut fiziki AN UkrSSR, Kiyev.  
(Naphthalene crystals—Spectra)

SOSKIN, M.S.

Determining the refraction indices of crystals with a Jamin  
interferometer. Opt. i spektr. 11 no.6:768-769 D '61. (MIRA 14:11)  
(Crystals—Optical properties)  
(Interferometry)

9.2576 (also 4205)

44158

S/181/62/004/010/055/063  
B102/B104

AUTHORS: Broude, V. L., Mashkevich, V. S., Prikhot'ko, A. F.,  
Prokopyuk, N. F. and Soskin, M. S.

TITLE: Possibility of obtaining induced radiation in systems with  
electron vibrational levels

PERIODICAL: Fizika tverdogo tela, v. 4, no. 10, 1962, 2976-2978

TEXT: A possibility of obtaining negative temperatures and induced  
radiation in a four-level scheme of molecular systems is discussed. The  
scheme (Figure) consists of the ground state (1), a vibrational level of  
the electron ground state (2), the first excited electron level (3), and  
the totality of all higher levels (4). 1-4 is a transition due to light-  
quantum absorption, 4-3 a radiationless transition, 3-2 the transition  
used for obtaining the induced radiation and 2-1 again a radiationless  
transition. The lifetimes of the radiative transitions are

$\tau_r \sim 10^{-7} - 10^{-9}$  sec, those of the radiationless transitions are  $\tau_n \ll \tau_r$ .  
 $\tau_n$  has to be small for obtaining the induced radiation. Generation of

Card (1/4)

S/181/62/004/010/055/063

B102/B104

Possibility of obtaining induced ...

coatings with a certain  $R(\omega)$  dependence allows of annihilating all induced radiation frequencies other than a chosen one, where  $R$  has a peak. Thus such a system can be used as an "antifilter". There is 1 figure. The most important English-language references are: W. Kaiser et al. Phys. Rev., 123, 765, 1961; E. G. Brook et al. J. Chem. Phys. 35, 759, 1961.

ASSOCIATION: Institut fiziki AN USSR, Kiyev (Institute of Physics AS UkrSSR, Kiyev)

SUBMITTED: June 6, 1962

Card 3/4

Possibility of obtaining induced ...

S/181/62/004/010/055/063  
B102/B104

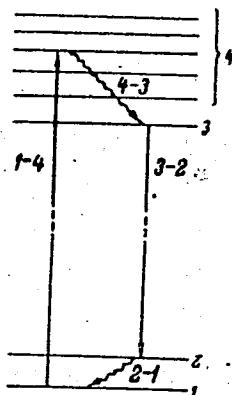


Fig.

Card 4/4

S/185/62/007/006/007/014  
D407/D501

Light dispersion and ...

tral distribution of the reflected light, but not its absolute value. The Kramers-Kronig dispersion relations were checked by the method of M. S. Brodin et al (Ref. 6: Opt. i spektr., 6, 28, 1959). Thereby, the amplitude of the dispersion curve can be approximately determined by the formula

$$\Delta(\mu^2)_{\text{theor.}} = 2,45 \chi_{\max} \mu_0 \quad (4)$$

where  $\chi_{\max}$  and  $\mu_0$  are, respectively, the dimensionless absorption coefficient and the refraction index at the maximum of the absorption band. From the Kramers-Kronig relations one also obtains the following expression for the oscillator strength f of the various absorption bands

Card 2/4

Light dispersion and ...

S/185/62/007/006/007/014  
D407/D301

(anthracene; 1,2-benzanthracene, etc.), these relations do not hold. Fresnel's formula was also verified. The oscillator strengths of the absorption bands under investigation were calculated (using formula (5)). Thereby one obtained for the band  $A_1$  ( $\nu = 31\ 475\ \text{cm}^{-1}$ ),  $f_{A_1} = 1.1 \cdot 10^{-5}$ , and for  $B_1$ ,  $f_{B_1} = 1.8 \cdot 10^{-3}$ . The molecular band  $M_1$  ( $\nu = 31\ 960\ \text{cm}^{-1}$ ) was also investigated; the oscillator strength of its a-component  $f_{M_1}^a = 4 \cdot 10^{-4}$ . In addition, the polarization ratios for the various bands were determined; thus, in the case of the band  $M_1$ , the polarization ratio equals 7. There are 4 figures and 1 table.

ASSOCIATION: Instytut fizyky AN UkrRSR, Kyyiv (Institute of Physics of the AS UkrRSR, Kiyev)

SUBMITTED: January 2, 1962  
Card 4/4

BROUDE, V. A., MASKEVICH, V. S., PRIKHOT'KO, A. F., PROKOPIJK, N. F., SOSKIN, M. S.

"Induced radiation in molecular crystals."

A four-level scheme for a quantum generator was discussed. It was shown that optical properties of molecular crystals provide a basis for the realization of a quantum generator.

The report presented at the 11th Conference on Luminescence (Molecular luminescence and luminescence analysis) Minsk, 10-15 Sept. 1962.

BROUDE, V., kand. fiz.-matem. nauk; SOSKIN, M., kand. fiz.-matem. nauk

"Laserostation speaking". Znan. ta pratsia no.5:7-8 My '63.  
(MIRA 16:6)

(Lasers)

L 8459-65 EWA(k)/FBD/EWT(l)/EWT(m)/EEC(k)-2/K/EEC(t)/T/EEC(b)-2/EWP(k)/EWP(q)/  
EWP(b)/EWA(m)-2/EWA(h) Pf-l4/Pi-l4/Pl-l4/Pn-l4/Po-l4 IJP(c)/SSD/BSD/RAEM(a)/AFWL/  
ASD(a)-5/ASD(d)/AFETR/RAEM(e)/RAEM(i)/RAEM(c)/ESD(gs)/ESD(t)/RAEM(t)/AFTC(p) WG/  
ACCESSION NR: AP4039584 WH/JD/JG 8/0185/64/009/005/0570/0573

AUTHOR: Bayborodin, Yu. V.; Broude, V. L.; Kravchenko, V. Y.; Soskin, M. S. B

TITLE: On the possibility of obtaining a series of powerful single (giant)  
pulses with a Ruby Laser

SOURCE: Ukrayins'kyi fizichnyi zhurnal, v. 9, no. 5, 1964, 570-573

TOPIC TAGS: ruby laser, neodymium doped glass laser, laser, laser modulation,  
pulsed laser, giant pulse laser, laser pulse repetition frequency, laser output,  
laser pumping threshold, optical pumping

ABSTRACT: A method was found whereby the output pulse of a ruby laser could be  
broken up into a series of discrete powerful (giant) pulses with pulse repetition  
frequency PRF at least as great as 20kc/s. One of the disadvantages of ruby and  
neodymium-doped-glass lasers is the low PRF; complicated apparatus is necessary  
to achieve PRF's of even several cycles per second. Peak powers of these high PRF  
devices do not exceed 1-10 kw, and the output pulse is a nonperiodic "comb-structured"  
series that is inconvenient to work with. During the course of theoretical  
and experimental laser modulation investigations, a scheme became apparent which  
could yield PRF's up to several kc/s for only one flash of the pumping lamp. At

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L 8459-65  
ACCESSION NR: AP4039584

the very moment following the first stimulated emission pulse, the impurities are still in a relatively highly excited state; pumping power only slightly above threshold is needed to produce a second stimulated emission pulse. The flash of the pumping lamp is of the order of a millisecond, and in this scheme a chopper is inserted into the resonant cavity to chop the pumping light at frequencies of 5, 10, and 20 kc/s. The oscillograms of enclosures 01 through 03 demonstrate the effect of chopping of the pumping light. Figure 1 of the Enclosure shows the pumping pulse. This and all other figures were obtained by attenuating the output intensity by a factor of 100 before detection with a photodetector. A 20 kc/s train from an audiooscillator is likewise supplied below each trace for calibration. Figure 2, shows the normal ruby emission when no chopper is used. Figures 3, 4, and 5 show the output when the chopper is run at PRF's of 5, 10, and 20 kc/s, respectively. It can be seen that a PRF for giant pulses of 20 kc/s is by no means an upper limit. This method is not dependent on any particular property of a three-level laser because it is a general characteristic of a laser medium to remain excited to about threshold just after the first emission. This method of controlling PRF's will be valuable in the study of the kinetics of laser emission.  
Orig. art. has: 5 figures.

Card 2/6

L 5459-65

ACCESSION NR: AP4039584

ASSOCIATION: Instytut Fizyki AN UkrSSR, Kiev (Institute of Physics, AN UkrSSR)

SUBMITTED: 24Jan64

ENCL: 03

SUB CODE: M

NO REF Sov: 001

OTHER: 004

Card 3/6

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001652520017-2

L 8459-65  
ACCESSION NR: AP4039584

ENCLOSURE: 01

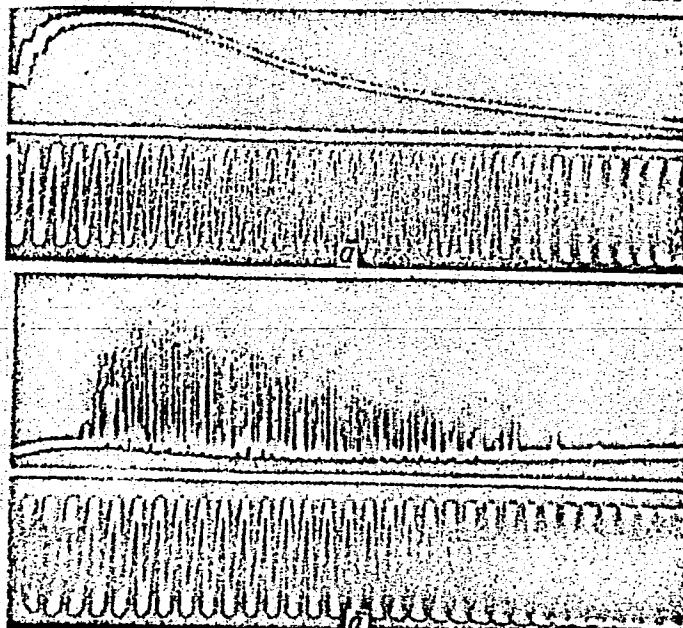


Fig. 1

Fig. 2

Card 4/6

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001652520017-2"

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CIA-RDP86-00513R001652520017-2

L 8459-65

ACCESSION NR: AP4039584

ENCLOSURE: 02

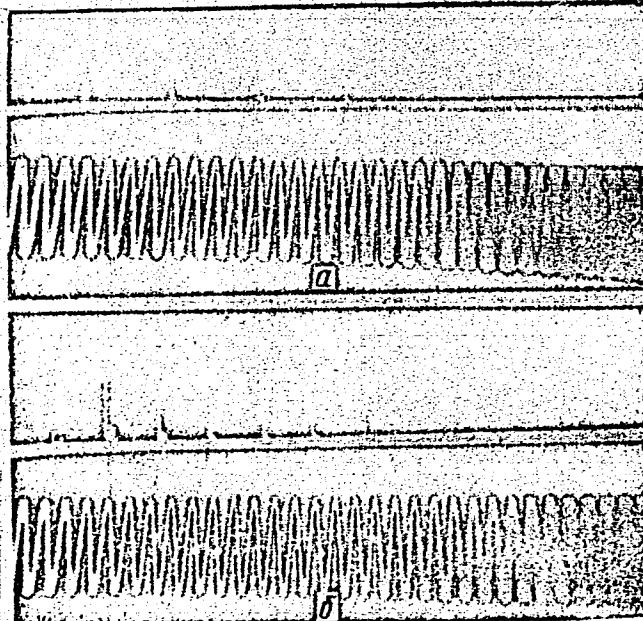


Fig. 3

Fig. 4

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CIA-RDP86-00513R001652520017-2"

L 8459-65  
ACCESSION NR: AP4039584

ENCLOSURE: 03

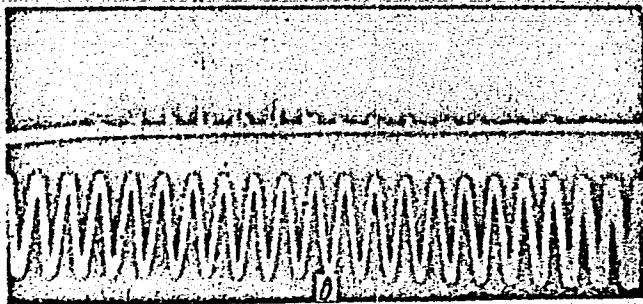


Fig. 5

For explanation of figures - see text of abstract

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L 23523-65 EWT(1)/EEC(t) Feb IJP(c)

ACCESSION NR: AP4046687

S/0185/64/009/009/1031/1032

AUTHC :: Broude, V. L.; Vil'chy\*ns'ka, L. P.; Sal'kova, K. M.; Soskin, M. S.

TITLE: Characteristics of the stimulated Raman scattering in benzene

SOURCE: Ukrayins'ky\*y fizy\*chny\*y zhurnal, v, 9, no. 9, 1964, 1031-1032

TOPIC TAGS: stimulated Raman scattering, ruby laser, benzene light scattering, laser

ABSTRACT: The authors achieved a stimulated combination scattering (Raman scattering) in liquid benzene by placing the cell in front of a ruby laser between two dielectric mirrors (reflection coefficient for the 6200 to 7500 Å region 99.5%). The energy of the flashes of the laser pumped with two lamps of the IFP-type, was about 3.5 kj. The light from the laser and from the benzene cell was dispersed with a monochromator and the spectrum observed with a photomultiplier and an oscilloscope. Two spectra were registered, one from the ruby laser, the other from the stimulated Raman scattering in benzene. Orig. art. has: 2 figures.

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L 23523-65

ACCESSION NR: AP4046887

ASSOCIATION: Instytut fizyki AN URSR, Kiev (Institute of Physics, AN URSR)

SUBMITTED: 25May84

ENCL: 00

SUB CODE: EC , OP

NO REF SOV: 001

OTHER: 006

Cord. 2/2

L 23457-65 EWG(j)/EWA(k)/FBD/EWT(1)/EWP(e)/EWT(m)/EEC(k)-2/EEC(t)/T/EEC(b)-2/  
EWP(k)/EWA(m)-2/EWA(h) Pn-4/Po-4/Pf-4/Peb/Pi-4/P1-4 IJP(o) WG/WH

ACCESSION NR: AP5000631

S/0185/64/009/011/1267/1268

AUTHOR: Broude, V. L.; Pogoryelyy, O. M.; Soskin, M. S.; Stetsenko, B. V.; Yatsenko, O. F.

TITLE: Radiation fluctuations of a pulsed laser

SOURCE: Ukrayins'kyy fizichnyy zhurnal, v. 9, no. 11, 1964,  
1267-1268

TOPIC TAGS: laser, pulsed laser, laser radiation intensity, ruby  
crystal, neodymium glass

ABSTRACT: An investigation is made of the relationship between the intensities of "spikes" radiated from two ends of a pulsed laser. A special laboratory setup was used for the measurement of laser radiation. The measurements consisted in photographing the flashes from both ends of the crystal. The intensities of "spikes" were measured (with an accuracy of 5-10%) and their ratios calculated. The ratios of radiation intensities from two resonator ends for different "spikes" within the same flash differed by as much as 20 to 40 percent. Other regularities, such as the dependence of

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ACCESSION NR: AP5000631

scattering on intensity and the moment of "spike" radiation within the flash were not observed. Noncorrelation of laser radiation intensity with ruby crystal and neodymium glass in the case of dielectric mirrors with a reflection coefficient close to 100 percent was approximately identical. Scattering decreases when pumping is increased above the threshold. Orig. art. has: 2 figures. [KM]

ASSOCIATION: Instytut fizyky AN URSR, Kiev. (Institute of Physics, AN UkrSSR)

SUBMITTED: 25Jun64

ENCL: 00

SUB CODE: EC

NO REF Sov: 005

OTHER: 001

ATD PRESS: 3174

Cord 2/2

PRIKHOT'KO, A.F.; SOSKIN, M.S.; TOMASHCHIK, A.K.

Measurement of the absorption spectra slender deformed  
naphthalene crystals. Opt. i spektr. 16 no. 4:615-618  
(MIRA 17:5)  
Ap '64.

L 6515-66 EWA(k)/FPD/EWT(1)/EEC(k)-2/T/EWP(k)/EWA(m)-2/EWA(h) SCTB/IJP(c)  
ACC NR: AP5027036 WG SOURCE CODE: UR/0120/65/000/005/0207/0210

AUTHORS: Broude, V. L.<sup>44</sup>, Kravchenko, V. I.<sup>44</sup>, Soskin, M. S.<sup>44</sup>

ORG: Institute of Physics, AN UkrSSR, Kiev (Institut fiziki AN UkrSSR)

TITLE: Investigation of time characteristics in the generation of giant laser pulses

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1965, 207-210

TOPIC TAGS: laser optics, laser modulation, ruby laser, laser measurement, giant pulse, Q spoiled laser

ABSTRACT: An experiment for studying the kinetics of giant laser pulse generation by using a prism-shutter system is described. Its main purpose was to relate the time change in the quality of the optical cavity to the time sweep of the generated pulse. The equipment consists of a beam-modulated laser (a ruby crystal), transmission system, measuring devices, and a circuit for oscillograph sweep trigger control. The optical cavity of the laser consists of a plane

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UDC: 621.378.325

09011738

L-10000-00 PDD/CWI(1)/CWP(e)/CWI(m)/CCE(K)-2/1/CWP(K)/CWP(D)/CWA(M)-2/CWA(N) SC10/  
LJP(c) WG/WH

ACC NR: AP6002468 SOURCE CODE: UR/0386/65/002/011/0519/0521

AUTHOR: Broude, V. L., Kravchenko, V. I., Prokopyuk, N. F., Soskin, M. S. 44. 72

ORG: Physics Institute, Academy of Sciences UkrSSR, Kiev (Institut fiziki Akademii nauk UkrSSR)

TITLE: Spectral composition of radiation from neodymium glass in a laser cavity 15, 44 25, 44

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniya, v. 2, no. 11, 1965, 519-521, and insert between p. 520 and 521

TOPIC TAGS: laser, laser optics, solid state laser, laser resonator

ABSTRACT: Laser action is reported on various lines throughout a spectral range five times as broad as the range of stimulated emission usually observed from a Nd<sup>3+</sup> doped glass laser (2% Nd<sup>3+</sup>). A special "dispersion" resonator developed by the author (Author certificate 164325, 1 March 1963; IN: Byulletin' izobreteniya i tovarnykh znakov, no. 15, 1963; see also Adademiya nauk SSSR, Doklady, v. 163, no. 6, 1965, p. 1342-1343) in which a prism is placed between the laser rod and the adjustable end mirror was used. In the Fabry-Perot setup, several lines appeared near 9440 cm<sup>-1</sup> at the threshold for laser action. The number of lines increased with the pump power and at the peak pump power (6 times the threshold) the lines spanned the region between 9390 and 9470 cm<sup>-1</sup> at intervals between 3 and 5 cm<sup>-1</sup>. In the "dispersion" mode of operation, changes in the inclination of the mirror resulted in changes in the

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